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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,878	04/07/2000	Michael Dennis Krysiak	P/23-5-CIP	1363

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EXAMINER VALENTI, ANDREA M	
ART UNIT 3643	PAPER NUMBER

DATE MAILED: 08/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/544,878

Applicant(s)

KRYSIK ET AL.

Examiner

Andrea M. Valenti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Size Enlargement By Agglomeration, by Wolfgang Pietsch, Published by Wiley, 1991, pages 134-145 in view of German Patent DE 3442317 to Schuart et al.

Regarding Claims 18-21, Wolfgang teaches a method of making seed (page 137 second paragraph) capsules in a single apparatus by tumble/agitation agglomeration operation by inherently preconditioning the seed with a binding agent while tumbling the seed in a bed of fine particulate to create layers of matter about the seed; the fine particulate all being in a solid state (Wolfgang page 136, section 4.2.1.1, second paragraph, second line "discrete solid particles and element #1 under Steps 3 and 4, "apparatus producing movement of densely dispersed bulk mass of particulate solids"; and page 138, section 4.2.1.2.1, line 6; and page 140, third paragraph, first two sentences) when it comes in contact with the seed after the seed has come in contact with the binder (Page 135 third paragraph, last sentence; page 135, fifth paragraph, 8th line; and page 136 section 4.2.1.1). Although Wolfgang teaches a seed/nuclei, he does not explicitly teach that the seed is a plant seed. However, Schuart teaches that it is old and notoriously well-known to select a plant seed to undergo agglomeration (Schuart

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English translation title "Method of Coating Plant Seeds") for the advantage of applying fertilizers to the seed, for ease of handling of the seeds, for time released germination of the seed etc. Therefore, it would have been obvious to one of ordinary skill in the art to select a plant seed as the seed taught by Wolfgang since the modification is merely the selection of a known particulate nuclei modified for the advantage of handling large volumes of material effectively utilizing a simple apparatus as taught by Wolfgang (Wolfgang page 135 first line, fifth paragraph).

Regarding Claims 4-17, Wolfgang as modified teaches an agglomeration process utilizing a tumble agglomeration (page 136 section 4.2.1.1) and mentions balling disc, but Wolfgang is silent on specifically identifying a pan pellitizer, disk pellitizer, paddle mixer, horizontal pan, powder blenders, flow-jet mixer, planetary mixer, cone mixer, ribbon mixer, pin type mixer, vertical mixer, pin mixer, cone pelletizer, fluidized bed. However, these apparatuses are all old and well-known seed coating, agglomeration, or mixing machines. It would have been obvious to one of ordinary skill in the art to modify the teachings of Wolfgang with any of the machines listed in claims 4-17 since these are merely alternate equivalent agglomeration machines that perform the same intended function of agglomerating particles with a coating and one would select a particular agglomeration machine to satisfy different economic, maintenance, and time parameters and to accommodate different types of coatings i.e. fertilizers or nutrient coatings.

Regarding Claim 22, Wolfgang is silent on the preconditioning and conditioning steps are repeated to add additional layers to the seed. However, it would have been

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obvious to one of ordinary skill in the art to modify the teachings since the modification is merely duplicating the process to provide a more comprehensive seed coat and does not present a patentably distinct limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by German Patent DE 3442317 to Schuart et al.

Regarding Claims 17, 19, 21, and 6, Schuart et al teaches a method of making seed capsules (Schuart English translations page 2 line 1) in a single apparatus by a tumbling/agitation agglomeration operation by preconditioning (Schuart English translation page 2 line 6-7; page 3 last sentence; page 7 last sentence; page 8 first complete sentence; page 9 first paragraph last sentence; page 10 line 8-9) the seed is the nucleus and receives a binding agent while tumbling the seed; conditioning the seeds by tumbling the seed in a bed of fine particulate to create layers of matter about the seed; and the fine particulate all being (Schuart page 3 , last paragraph "the coating composition are brought into contact with the seed material as powder in a stationary or revolving drum with the use of liquid") in a solid state when it comes in contact with the seed after the seed has come in contact with the binder (Schuart et al English translation pages 3, 7, and 8).

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Regarding Claim 18, Schuart et al discloses wrapping more than one nucleus/seed in layers of fine particles (Schuart English translation page 3).

Regarding Claim 20, Schuart et al teaches the preconditioning of spraying a precoated material on the seed and subsequently driving off any binding agent used to apply the particulate layers on the seed (Schuart et al English translation claims).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent DE 3442317 to Schuart et al.

Regarding Claims 4-16, Schuart et al teaches an agglomeration process utilizing a tumbler or rotating drum (Schuart et al English translation page 3), but Schuart et al is silent on specifically identifying a pan pelletizer, disk pelletizer, balling disk, paddle mixer, horizontal pan, powder blenders, flow-jet mixer, planetary mixer, cone mixer, ribbon mixer, pin type mixer, vertical mixer, pin mixer, cone pelletizer, fluidized bed. However, these apparatuses are all old and well-known seed coating or mixing machines. It would have been obvious to one of ordinary skill in the art to modify the teachings of Schuart et al with any of the machines listed in claims 4-17 since these are merely alternate equivalent agglomeration machines that perform the same intended function of agglomerating particles with a coating and one would select a particular agglomeration

machine to satisfy different economic, maintenance, and time parameters and to accommodate different types of fertilizers or nutrient coatings.

Regarding Claim 22, Schuart et al is silent on the preconditioning and conditioning steps are repeated to add additional layers to the seed. However, it would have been obvious to one of ordinary skill in the art to modify the teachings since the modification is merely duplicating the process to provide a more comprehensive seed coat and does not present a patentably distinct limitation.

Response to Arguments

Applicant's arguments filed 20 June 2005 have been fully considered but they are not persuasive.

Examiner maintains that Schuart et al teaches that all of the fine particulate is in a solid state when it comes into contact with the seed after the seed has come in contact with the binder. Applicant argues that Schuart does not teach that the coating is in a solid state when applied to the seed. However, Schuart quite clearly states that the coating substance is a dust. Schuart outlines the method steps of the seed being agitated, since a revolving drum is a tumble agglomeration operation, and a binder is applied to the seed while simultaneously applying a dry dust coating.

There is sufficient motivation present by Wolfgang to support the combination of Wolfgang and Schuart. Wolfgang teaches tumble agglomeration is a known means of effectively agglomerating materials of a large volume and that it is known to take a nuclei and agglomerate matter to the nuclei. Schuart teaches that it is known to utilize a plant seed as a nuclei for an agglomeration process. One of ordinary skill in the art

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would look to the teachings of Schuart to modify the teachings of Wolfgang for the production of a large volume of agglomerated seeds.

Wolfgang teaches that all of the particles are in fact in a solid state since Wolfgang teaches that the nuclei is first sprayed with binder and then later fine particulates are added (Wolfgang page 140, second paragraph).

Applicant has not claimed that the binder is a solid, so that means the binder claimed by applicant can be a liquid. If the binder is a liquid and solid particulate is added after the liquid binder then the examiner maintains that Schuart and Wolfgang both read on these limitations. Even if the binder first contacts the solid fine particulate before it reaches the nuclei, when it does reach the nuclei the binder is on the outside of the solid fine particulate and thus the fine particulate inherently will not contact the nuclei until after the binder has first contacted it.

The broad nature of applicant's independent claim still enables it to be read on by the teachings of Wolfgang and Schuart.

Examiner reiterates the response to arguments presented in the previous office action:

The declaration of Le Hoffmann filed 8 September 2003 is insufficient to overcome the rejection based upon Schuart. Hoffmann argued that the fine particulate and the liquid binder form an emulsion to coat the seed. However, since Schuart teaches the introduction of Kaolin in dust form some of the seed would inherently first encounter the spray of the binder before encountering the dust. Schuart does not teach an emulsion, but teaches the application of two separate substances from different sources

to constitute the coating i.e. the binding agents is sprayed into the system and the a dust particles is separately introduced into the system. Schuart page 2 line 6-7 teaches that the binder/spray is sprayed onto the surface of the seed and that a powder material comes in contact with the seed material on page 3 last sentence. Also, Schuart teaches at the top of page 8 that the droplets of water are first deposited on the seed surface.

Applicant has not sufficiently illustrated that the method steps of applicant's design result in an entirely different end product then the end product of Schuart. Schuart teaches that tumble agglomeration is a known seed coating technology on page 3 last paragraph. Furthermore, Schuart teaches that it is old and notoriously well-known in the art to increase the size of seeds by coating them with particles. Merely selecting any known enlargement technology is an obvious modification to one of ordinary skill in the art at the time of the invention since the selection is merely a manufacturing design choice to achieve an efficient and cost effective coat. Tumble agglomeration is a very old and well-known method of size enlargement as taught by Wolfgang.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 571-272-6895. The examiner can normally be reached on 7:00am-5:30pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrea M. Valenti
Patent Examiner
Art Unit 3643



Peter M. Poon
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23 August 2005